IN THE SPECIFICATION:

Revise page 6, line 19- page 7, line 2 to read as follows:

- Furthermore, at least one of the wavelength-dependent elements can be positioned in a rotating and/or swivel manner. With embodiment variations which can be derived from a device in accordance with means for generating at least one reference light ray, which has frequency shift and/or frequency modulation or phase shift and/or phase modulation and/or time displacement over the optical signal to be detected, including a beam splitter and a frequency shifter and/or frequency modulator or a phase shifter and/or phase modulator and/or travel distance, the wavelength of the signal to be demodulated can be freely set by adjusting the geometry. In particular, it is possible in various variations of the device to ~~adjust~~ select the wavelength by a simple turning of one of the optical elements. -;

Page 8, revise lines 12-15 to read as follows:

Fig.3 shows a principle design of a device in accordance with the invention using the ray path of a Mach-Zehnder interferometer; ~~and~~

Fig. 4 shows a principle design of a device in accordance with the invention wherein one of the partial rays is delayed in time; and

Fig. 5 shows a principle design of a device in accordance with the invention utilizing a coupler. -; and

Revise page 10, line 1 - page 11, line 8 to read as follows:

- Fig. 2 shows the principle design of a simple embodiment of a device in accordance with the invention using the ray path of a Michelson interferometer with the beam splitter 10. A prism 12 is used as the wavelength-dependent element. One of the mirrors 20 forms, by suitable means to shift this mirror, a phase modulator, the other mirror 30 is pivoted in a suitable manner to ~~adjust~~ select the wavelength to be detected. The detector 40 has an areal design and integrates the intensity over the whole cross0-section of the ray detected. A lock-in amplifier is used as the demodulator 50.. To control the mirror 20 designed as a phase modulator, the modulator control 60 is used.

Fig. 3 shows the principle design of a simple embodiment of a device in accordance with the invention using the ray path of a Mach-Zehnder interferometer. The first beam splitter 11 is designed as a diffracting optical element and so itself forms the wavelength-dependent element. One of the mirrors 20 forms, by suitable means to shift this mirror 20, a phase modulator; the other mirror 30 is pivoted in a suitable manner to ~~adjust~~ select the wavelength to be detected. The partial rays brought to interference by the second beam splitter 13 (combiner) are detected by two detectors 40,40'. The detectors 40, 40' have an areal design and integrate the intensity over the whole cross-section of the ray detected in each case. A lock-in amplifier with differential input is used as the demodulator 50. To control the mirror 20 designed as a phase modulator, the modulator control 60 is used.

Fig. 4 shows the principle design of an embodiment of the device in accordance with the invention with a time shift between the reference and the signal rays. The change in the relative phase position between the partial rays is achieved by a time displacement of one of the partial rays (delay due to longer period), with a suitable phase modulation or frequency modulation of the signal being a pre-requisite in this case. The incident signal is guided through a glass fibre 70. The first beam splitter 80 is designed with means if fibre glass technology. One part of the signal is expanded after a short period and guided to the conventionally designed second beam splitter 13 via a mirror 30 pivoted in a suitable manner to ~~adjust~~ select the wavelength to be detected. The other ray is delayed by a suitably sized travel distance 90, then expanded and guided to the second beam splitter 13 via the wavelength-dependent element 14 designed here a a diffracting optical element. The partial rays brought to interference by the second beam splitter 13 (combiner) are detected by detectors 40, 40'. The detectors 40, 40' have an areal design and integrate the intensity over the whole cross-section of the ray detected in each case. The demodulator 50 is ~~realised~~ realized electronically and must have a varying design dependent on the modulation type of the signal. -.